THE SCIENTIFIC BARCLAY ARGUMENTATION

There are basically five categories of arguments :

1. Nicotine/cotinine data in blood/urine.

2. Aerodynamics of smoke/stronger taste.

3. The variability of the behaviour of smokers.

4. Discrimination between Barclay and other ventilated cigarettes by amended tested methods.

5. The verification of the functioning of the ventilation system under real conditions.

---

1. Data on concentrations of nicotine or its metabolite cotinine in blood or urine and other pharmacological or physiologigal data such as levels of mutagenic activities in the urine.

BAT attempts to demonstrate that the magnitude of such data does not differ for Barclay from other cigarettes which are rated as having a smoke yield of 1mg tar. Hence they conclude that Barclay is a 1mg product.

There are two basic faults in the reasoning :

(a) As Dr. Blackman (then Director of R&D BAT Headquaters) has explained in his letter dated 25th September, 1984 : there is no constant relation between nicotine or cotinine levels and tar uptake. This is why it is futile to attempt making estimates of tar uptake from such data. This

2025441035

Source: https://www.industrydocuments.ucsf.edu/docs/kmwb0003

conclusion is valid, of course, for routine as well as special studies.

(b) Physiological or pharmacological studies deal with the smoker and not with the product. The litigation concerns the performance of the product Barclay which differs from the performance of other cigarettes.

---

2. Aerodynamics of smoke turbulences and taste intensity.

BAT wants to demonstrate that Barclay tastes stronger than one would expect for a 1mg tar cigarette because of special flow characteristics of the smoke in the mouth of the smoker.

The argumentation is irrelevant for two reasons :

(a) It is not contested that Barclay tastes stronger than other 1mg products. Taste intensity is primarily a function of smoke concentration. The smoke concentration of Barclay, which is higher than the one of other 1mg products and which is the reason for the litigation, explains easily the stronger taste.

(b) The subject of contestation is the magnitude of smoke yield of Barclay, which was incorrectly indicated as being 1mg tar, and not its stronger taste.

---

3. The variability of smoker behaviour, particularly when smoking cigarettes of different tar yield.

BAT wants to demonstrate that the variability of smokers' behaviour so wide that "small differences" of smoke yields are of no importance.

BAT miss the point entirely because :

(a) The range of 1mg tar for open ventilation and 11mg tar with closed ventilation is so enormous that it can not be negelected even if one considers that the same smoker might vary his/her smoking pattern from one cigarette to the other.

BAT use the somewhat larger differences in smoking behaviour between different smokers (person to person variation) so as

2025441036

Source: https://www.industrydocuments.ucsf.edu/docs/kmwb0003

to give an exagerated impression of the degree of variation one and the same smoker might show when smoking his habitual cigarette brand. The latter variations are relatively small, as most smokers tend to adopt a very stereotype smoking pattern.

(b) The subject of litigation is the product Barclay and not the smoker.

---

4. BAT claim that Barclay is unfairly treated when being tested differently to other ventilated cigarettes.

There is a principle difference in design between Barclay and other ventilated cigarettes : the ventilation system of Barclay is blocked very easily by the smokers' lips, whereas the ventilation system of other cigarettes is not. At page nine of the judgement of the Landgericht Köln (Cologne), of 11th December, 1984, the following statement is made :

"Es entspricht bereits der Lebenserfahrung, dass ein System umso störanfälliger ist, je mehr Voraussetzungen für sein Funktionieren erfüllt sein müssen."

It is this different construction of the ventilation system of Barclay with its minute ventilation channels at the periphery of the filter, which does not fully function in the smokers' mouth - unless a cigarette holder is used by the smoker - which makes a differentiated testing of cigarettes of the type of Barclay necessary.

---

5. Testing of the functioning of the ventilation system when cigarettes are actually smoked by humans.

BAT alleges that such tests are irrelevant or misleading because human smoking behaviour intervenes or because the

2025441037

Source: https://www.industrydocuments.ucsf.edu/docs/kmwb0003

testing environment or the testing conditions are "unnatural".

The objective of such tests is only to verify whether or not the ventilation system of a given type of cigarette also functions when people smoke the cigarettes. This is very important to know, because the smoke yield depends very strongly upon the degree of ventilation.

It had been shown by a number of institutions independently, using different methods, that the ventilation system of Barclay is very susceptible to being blocked to varying degrees in real use, depending how a smoker happens to insert the cigarette into his mouth. Such studies were made by the US Testing Company Inc, by the three independent experts of the FTC, by the Fresenius Institute, by Dr. Jensen, by Dr. Neurath, by the University of Neuchâtel, by the Canton Chemist of Vaud, etc.

Whereas the fully functional ventilation system of Barclay assures a degree of ventilation of 70 - 80 percent, in reality, the ventilation values can drop to as low as 25 percent, being mostly in the range of 30 - 55 percent. This high degree of variability is real and not a testing error. It is due to the fact that smokers obstruct sometimes only 1, sometimes 2 or 3 and sometimes all 4 ventilation channels, with an associated varyation of the tar yield. So, unless Barclay is used with a cigarette holder, the 1mg tar yield obtained on a smoking machine with all four ventilation channels functional is meaningless.

Other ventilated cigarette do not show any comparable variation of their ventilation in real usage because their ventilation system is conceived in such a way that it can not easily be made non-functional by the smoker.

2025441038

Source: https://www.industrydocuments.ucsf.edu/docs/kmwb0003

The official testing as carried out now in Switzerland, indicating the maximum and minimum figures for Barclay, and the testing system imposed e.g. by the German and Norwegean authorities, calculating the average between the maximum and minimum figures, takes reality into consideration and provides results which allow a more realistic comparison of Barclay with other cigarettes.

H.W. Gaisch
Science & Technology
FTR/PME Neuchâtel

2025441039

Source: https://www.industrydocuments.ucsf.edu/docs/kmwb0003